



ENGINEERING S C I E N C E : An Annotated Bibliography

A M E R I C A N C E N T E R
B A L D W I N L I B R A R Y
1 4 T A W W I N S T R E E T
D A G O N T O W N S H I P

Engineering Science:

An Annotated Bibliography

An Introduction to Mechanical Engineering, by Jonathan Wickert. 2nd edition. Southbank, Vic: Thomson, c2006.

Richly illustrated, this text reflects the author's experiences and philosophy. He introduces vocabulary, skills, applications, and excitement of the mechanical engineering profession. The text balances problem solving skills, communications skills, design engineering analysis, real world applications and practical technology.

Applied Electronic Design, by D. Joseph Stadtmiller. Upper Saddle River, N.J: Prentice Hall, c2003.

The author presents unique discussions of the design process and issues relating to a wide range of electronic applications. It reviews the general design process in a concurrent engineering setting and focuses on manufacturability, quality service, and customer criteria. It is especially for electrical or electronic design engineers.

Applied Introductory Circuit Analysis for Electrical and Computer Engineers, by Michael Reed, Ron Rohrer. Upper Saddle River, N.J: Prentice Hall, c1999.

The author attempts to show simple symbolic analytical models can lead to great design insight. Development of this insight is something that should come before involved modeling of circuits using SPICE. DLC: Electric circuit analysis.

Beginning Digital Electronics through Projects, by Andrew Singmin. Boston, MA: Newnes, 2000.

The author uses thirty-five digital projects to teach beginner electronic without complex mathematics. It also provides practical exercises, building techniques and ideas for the projects, showing the reader how to build analog and digital electronics.

Civil and Environmental Systems Engineering, by Charles S. Revelle, E. Earl Whitlatch and Jeff R. Wright. NJ: Pearson, 2004.

The book features several chapters that present new techniques and methodologies in the context of real-life problem situations. It also focuses on the most modern skills available for the design, operation and evaluation of civil and environmental engineering systems, optimization/systems modeling and engineering economics. It describes how and why linear programming works & also provides a solid treatment of multiple objective programming. It is useful for practicing Civil and Environmental Engineers.

Commercial Observation Satellites: At the Leading Edge of Global Transparency, by John Baker. Rand Corp, 2001.

Featuring numerous satellite images and case studies, this book brings together an impressive group of experts to assess the implications of this emerging information technology.

Concepts in Engineering, by Mark T. Holtzapple and W. Dan Reece. Boston: Higher Education, 2005.

This book is an exciting new book which introduces fundamental engineering concepts to freshman engineering students. Its central focus is to positively motivate students for the rest of their engineering education, as well as their future engineering.

Electrical Power Technology, by David W. Tyler. Boston: Newnes-Butterworth, 2001.

This book is a comprehensive introductory text on electrical power, encompassing generation, electrical machines, motors, electrical materials, etc. David Tyler's approach is designed for independent or classroom study, with plenty of learning checks and activities throughout. The content is designed to cover Advanced GNVQ and BTEC NII syllabuses.

Electronic Troubleshooting, by Dan Tomal and Neal Widmer. 3rd edition. New York: McGraw-Hill, 2003.

This updated tool gives professional technicians and hobbyists all the fundamentals they need to do successful servicing and repair work. Time-saving tables, charts, and illustrations pinpoint equipment problems in a snap. Numerous reference guides, rules of thumb, and tricks of the trade all combine to assist them in troubleshooting the full spectrum of devices and products more easily than ever before.

Electronics for Dummies, by Gordon McComb and Earl Boysen. Hoboken, N.J.: Wiley, c2005.

With lots of photos and step-by-step explanations, this book will have you connecting electronic components in no time! It also covers the basics, choosing and using tools, and how to build more than a dozen really cool, inexpensive gizmos. Students will find this a great reference and supplement to the typical dry, dull textbook.

Elements of Environmental Engineering: Thermodynamics and Kinetics, by Kalliat T. Valsaraj. 2nd edition. Boca Raton: Lewis Publishers, c2000.

Completely revised and updated, second edition covers the applications of chemical thermodynamics and kinetics in environmental processes. Each chapter has been rewritten and includes new examples that better illuminate the theories discussed. Clearly and lucidly written, it provides extensive tables, figures, and data that make it the reference to have on this subject.

Engineering: An Endless Frontier, by Sunny Y. Auyang. Cam. Mass: Harvard University Press, 2004.

Genetic engineering, nanotechnology, astrophysics, particle physics: We live in an engineered world, one where the distinctions between science and engineering, technology and research, are fast disappearing. This book shows how, at the dawn of the twenty-first century, the goals of natural scientists to discover what was not known and that of engineers to create what did not exist are undergoing an unprecedented convergence.

Environmental Chemistry: A Modular Approach, by Ian Williams. New York: J. Wiley, c2001.

This book provides a comprehensive, balanced introduction to this multi-disciplinary area of chemistry. It also intended not only for chemists, but also for environmental and other science students, this text carefully introduces the chemistry needed to fully appreciate this subject, placing it in an applied and practical setting.

Foundations of Engineering, by Mark T. Holtzapple and W. Dan Reece. Boston: McGrawHill, 2003.

This book gives freshman engineering students a solid foundation for all their future coursework. It provides an overview to the engineering profession and of the skills they will need to develop, as well as an introduction to fundamental engineering topics such as thermodynamics, rate processes, and Newton's laws. This is a unifying concept that facilitates problem-solving across all engineering disciplines.

Fundamentals of Electric Circuit Analysis, by Clayton R. Paul. New York: John Wiley & Sons, c2001.

This book focused approach to circuit analysis and helps readers master essential circuit analysis skills in a one-semester course. It also covers all the important topics, while minimizing unnecessary detail, so that students can develop a lasting set of valuable analysis skills. It is focused on basic skills.

Landscape Architecture, as Applied to the Wants of the West: With an Essay on Forest Planting on the Great Plains, by H.W.S. Cleveland. Amherst: University of Massachusetts, c2002.

The book is especially significant as the first attempt to define and develop a comprehensive scope for the new profession of landscape architecture in its formative period. A new introduction to the text provides a historical backdrop to Cleveland's concern that ill-considered layouts for communities along the rapidly developing rail lines of the Midwest and Great Plains would negatively affect what he saw as the future of American civilization.

Mechanical Engineering Principles, by John Bird, Carl Ross. Boston: Newnes, 2002.

The authors introduce mechanical principles and technology through examples and applications - enabling students to develop a sound understanding of the principles needed by professional engineers and technicians. No previous background in engineering is assumed and theoretical concepts are supported by over 600 problems and worked examples.

Mechanical Engineering: Problems and Solutions, 164 Example Problems with Complete Step-by Step Solutions, by Richard K. Pefley. 6th edition. Chicago, IL: Engineering Press, 2004.

This book describes problem-solving skills as well as understanding of both fundamental and more difficult topics for the *Professional Engineering Exam*. It also provides a total of 164 problems with step-by-step solutions. It is comprised of 20% text and 80% problems and solutions.

Nanofuture: What's Next for Nanotechnology, by J. Storrs Hall. Amherst, NY: Prometheus Books, 2005.

This book explaining how previous technological developments have affected us, how nanotechnology fits into the historical trends for technologies ranging from motors to medicine, and how the continuation of these trends, with nanotechnology as a strong determining factor, will have a profound impact on the future. The author explains how nanotechnology will make possible many of the science fiction dreams of the past.

Nanotechnology for Dummies, by Richard Booker and Earl Boysen. Hoboken, N.J: Wiley, 2005.

This title demystifies the topic for investors, business executives, and anyone interested in how molecule-sized machines and processes can transform our lives. It covers nanotechnology's origins, how it will affect various industries, and the limitations it can overcome.

Power Control Circuits Manual, by R.M. Marston. 2nd edition. Boston, Mass: Newnes, c1997.

It takes an in-depth look at the whole subject of electronic power control, covers everything from basic principles to AC power control data and modern house re-wiring, and presents a vast range of useful circuits and diagrams.

Practical Electronics for Inventors, by Paul Scherz. New York: McGrawHill, 2000.

It is an intuitive, applications-driven guide to electronics for engineers, hobbyists, and students—one that doesn't overload readers with technical detail. Over 750 hand-drawn images provide clear, detailed instructions on how to turn theoretical ideas into real-life gadgets. It also covers integrated circuits (ICs), digital electronics, and various input/output devices; includes a complete chapter on the latest microcontrollers.

Schaum's Outline of Theory and Problems of Electronic Devices and Circuits, by Jimmie J. Cathey. 2nd edition. New York: McGraw-hill, 2002.

This updated version provides an introductory problem-solved text for understanding fundamental concepts of electronic devices, their design, and their circuitry. It is providing an interface with Pspice, new key features include a new chapter presenting the basics of switched mode power supplies, thirty-one new examples, and twenty-three PS solved problems.

Schaum's Outlines of Thermodynamics for Engineers, by Merle C. Potter, Craig W. Somerton. New York: McGraw-Hill, 2006.

This second edition is reorganized and expanded to conform to the more user-friendly, pragmatic approach to the material now used in classes. It also includes new sample tests simulate quizzes & tests given in class and 500 fully solved problems

Teach Yourself Electricity and Electronics, by Stan Gibilisco. 3rd edition.
New York: McGrawhill, 2001.

This book is great for preparing for licensing exams, previous editions of this guide have been prized by thousands of students and professionals for the book's uniquely thorough coverage, ranging from dc and ac concepts and circuits to semiconductors and integrated circuits. It is packed with more than 500 learning-enhanced illustrations, practical examples, and self-quizzes and tests.

The American City: What Works, What Doesn't, by Alexander Garvin.
2nd edition. New York: McGraw-Hill, c2002.

The author analyzes more than 250 projects and programs in 100 cities, assessing, what works and what has failed. The author also discusses subsidized housing, planned communities, suburban development, rehabbing, and historic preservation. This is a vital resource for everyone interested in cities.

The Complete Idiot's Guide to Electrical Repair, by Terry Meany.
Indianapolis, IN: Alpha Books, c2000.

This book is a basic instruction manual on home wiring and repair. It covers AC/DC, volts, watts, fuses, and circuit breakers, national and local codes, and caution signs and safety concerns. It also covered are extension cords and multiple strips, switches and receptacles, installing fixtures and adding new circuits, and working around existing wiring.

REFERENCE

Audel Guide to the 2005 National Electrical Code, by Paul Rosenberg. Hoboken, NJ: Wiley Technology Pub, 2004.

CRC Handbook of Engineering Tables, edited by Richard C. Dorf. Boca Raton: CRC Press, 2004.

Dictionary of Engineering Materials, by Harald Keller and Uwe Krb. NJ: Wiley-Interscience, 2004.

Encyclopedia of Wireless Telecommunications, by Francis Botto. Boston: McGraw-Hill, 2002.

Handbook of Electrical Tables and Design Criteria, by V.F. Christoffer. New York: McGraw-Hill, c1998.

Handbook of Materials Selection, edited by Myer Kutz. New York: John Wiley & sons, 2002.

NEC 2005: NFPA 70: National Electrical Code: International Electrical Code Series. 2002 ed. Quincy, Mass: National Fire Protection Association, c2004.

Newnes Dictionary of Electronics, by S. W. Amos and R. S. Amos. 4th edition. Oxford: Newnes, 2002.

Standard Handbook of Engineering Calculations, by Tyler G. Hicks. 4th edition. New York: McGrawHill, 2005.

The Engineering Handbook, edited by Richard C. Dorf. 2nd edition. New York : CRC Press, 2005.

The Handbook of Mechanical Engineering, by staff of Research & Education Association. Piscataway, N.J: Research & Education Association, c2004.

Wiley Electrical and Electronics Engineering Dictionary, by Steven M. Kaplan. NJ: Wiley Interscience, 2004.

